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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/534,161	05/05/2005	Knut Kieschnick	DE02 0251 US	2596

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EXAMINER	
ABDIN, SHAHEDA A	
ART UNIT	**PAPER NUMBER**
2629	

NOTIFICATION DATE	DELIVERY MODE
07/09/2007	ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

ip.department.us@nxp.com

Office Action Summary	Application No.	Applicant(s)	
	10/534,161	KIESCHNICK ET AL.	
	Examiner	Art Unit	
	Shaheda A. Abdin	2629	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *05 May 2005*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-9* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-9* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *05 May 2005* is/are: a)☐ accepted or b)☒ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Priority

1. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

Drawing

2. The drawings are objected to Fig. 1 because it does not label the rectangular box as required by rule 1.83. Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Prior Art

3. Fig. 2 should be designated by a legend such as --Prior Art-- because only that which is old is illustrated. See MPEP § 608.02(g). Corrected drawings in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Specification

4. The title of the invention is not descriptive. A new title is required that is clearly indicative of the invention to which the claims are directed.

Abstract

5. This application does not contain an abstract of the disclosure as required by 37 CFR 1.72(b). An abstract on a separate sheet is required.

The following guidelines illustrate the preferred layout for the specification of a utility application. These guidelines are suggested for the applicant's use.

Arrangement of the Specification

As provided in 37 CFR 1.77(b), the specification of a utility application should include the following sections in order. Each of the lettered items should appear in upper case, without underlining or bold type, as a section heading. If no text follows the section heading, the phrase "Not Applicable" should follow the section heading:

(a) TITLE OF THE INVENTION.
(b) CROSS-REFERENCE TO RELATED APPLICATIONS.

(c) STATEMENT REGARDING FEDERALLY SPONSORED RESEARCH OR DEVELOPMENT.
(d) THE NAMES OF THE PARTIES TO A JOINT RESEARCH AGREEMENT.
(e) INCORPORATION-BY-REFERENCE OF MATERIAL SUBMITTED ON A COMPACT DISC.
(f) BACKGROUND OF THE INVENTION.
(1) Field of the Invention.
(2) Description of Related Art including information disclosed under 37 CFR 1.97 and 1.98.
(g) BRIEF SUMMARY OF THE INVENTION.
(h) BRIEF DESCRIPTION OF THE SEVERAL VIEWS OF THE DRAWING(S).
(i) DETAILED DESCRIPTION OF THE INVENTION.
(j) CLAIM OR CLAIMS (commencing on a separate sheet).
(k) ABSTRACT OF THE DISCLOSURE (commencing on a separate sheet).
(l) SEQUENCE LISTING (See MPEP § 2424 and 37 CFR 1.821-1.825. A "Sequence Listing" is required on paper if the application discloses a nucleotide or amino acid sequence as defined in 37 CFR 1.821(a) and if the required "Sequence Listing" is not submitted as an electronic document on compact disc).

Claim Rejections - 35 USC § 102

6. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

7. Claims 1-3 and 7 are rejected under 35 U.S.C. 102(e) as being anticipated by Yun et al.(US Pub No: 2003/0189537).

(1) Regarding claim 1:

Yun in Fig. 5 discloses a display device (liquid crystal display, 12) with pixels (cells) arranged in columns m (odd and even number columns) and rows n (horizontal rows), in which the pixels of a row n can be selected by means of a row voltage supplied via control lines ([0048], lines 1-8), and column voltages that correspond to the image data of the selected pixel to be displayed can be supplied via data lines ([0050-0051], lines 9-15) wherein mutually adjoining pixel groups (adjacent cells) arranged in a row or column, consisting of adjoining pixels of a row or column, are connected to adjoining control lines or data lines as applicable, in alternation ([0046], [0047]).

(2) Regarding claim 2:

Yun teaches a pixel group comprising one pixel (liquid crystal cells formed into a zigzag pattern around the gate lines GLI to GLn+1 see [0062]).

(3) Regarding claim 3:

Yun teaches mutually adjoining pixels (adjacent liquid cells) of one row are alternately connected to the adjoining control lines (gate lines) ([0046-0047], [0062], lines 9-13).

(7) Regarding claim 7:

Yun teaches pixel comprising switching elements (switching device TFT) with control terminals (gate terminal) which are connected to control lines (G1-GLn+1) and data terminals (source terminal) which are connected to data lines (DL1-DLm) ([005],

Fig. 5).

Claim Rejections - 35 USC § 103

8. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

9. Claims 4 and 9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yun et al. in view of Takahara et al. (US patent No: 5436635).

(4) Regarding claim 4:

Note the discussion of Yun above. Yun teaches the delay unit (16) for storing column voltage values (i.e. buffer 48 stores fixed voltage signals), while a clock signal (SSC) can be supplied to the delay unit (16) (see [0056-0059], [0073-0074], Fig. 8 and 11). Yun does not teaches a delay unit connected to every second data lines.

However, Takahara in the same field of endeavor teaches a delay unit (source driver IC (P)) connected to every second data lines (i.e. SWp1, SWp3) (column 21, lines 39-55, Fig. 12).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time of invention to have substituted the delay unit as taught by Takahara into the delay unit of Yun so that the delay unit can be connected to every second data lines. In

this configuration the system would increase the luminance and avoid flicker thereby to enable the achievement of a high quality image display (Takahara, column 20, lines 12-21).

(9) Regarding claim 9:

Yun teaches all column voltage supply to the pixel based on clock signal and stored the signal in the buffer array 48. Takahara teaches without delay unit (without connection to SWp1-SWpn)) the column voltages for the columns are supplied to the pixels of the selected row (column 21, lines 39-55, Fig.12).

10. Claim 5 and 8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yun et al. in view of Kimura et al. (US patent No: 5253091).

(5) Regarding claim 5:

Note the discussion of Yun above. Yun teaches mutually adjoining pixels but does not teaches that mutually adjoining pixels of a column are connected to the adjoining data lines in alternation.

However, Kimura et al in the same field of endeavor teaches mutually adjoining pixels of a column are connected to the adjoining data lines in alternation (column 4, lines19-24, fig 4).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time of invention to incorporate the method as taught by Kimura into the display

device of Yun so that mutually adjoining pixels of a column can be connected to the adjoining data lines in alternation. In this configuration the system would reduced screen flicker with out increasing electric power consumption of the data drive circuit (Kimura, column 2, lines 29-36).

(8) Regarding claim 8:

Kimura discloses the rows (horizontal rows) and columns (vertical columns) situated at the edges of the display device are covered (see fig. 4 and F fig. 6).

11. Claim 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over Yun as applied to claims 1 and 5 above, and further in view of Takahara et al.

(6) Regarding claim 6:

Yun teaches a delay unit and clock signal (as discussed in claim 4) but does not teaches that a delay unit arranged in every second control line is provided for storing row voltage values.

However, Takahara et al in teaches a delay unit arranged in every second control line is provided for storing row voltage values (Column 15, lines 33-58, fig. 2).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time of invention to have substituted the delay unit as taught by Takahara into the delay unit of Yun so that the delay unit can be connected to every second control line

lines. In this configuration the system would increase the luminance and avoid flicker thereby to enable the achievement of a high quality image display (Takahara, column 20, lines 12-21).

Conclusion

12. The prior art made of record and not relied upon is considered pertinent to applicant's discloser.

Iwasaki et al. (5,774,099) teaches LCD display for reserving common signals.

Taniko et al. (5,093,655) teaches and LCD display for reversing the plurality of picture signals.

Kimura et al. (523091) teaches an LCD display having a Zigzag pattern.

Inquiry

13. Any inquiry concerning this communication should be directed to the examiner at (571) 270-1673 Monday- Friday 7:30 AM to 5:00 PM EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Chanh Nguyen, can be reached at (557) 272-7772.

Information regarding the status on an application may be obtained from the Patent Application information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only.

For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the

Electronic Business Center (EBC) at 866-217-9197 (tool-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9799 (IN USA OR CANADA) or 571-272-1000.

Any response to this action should be mailed to:

Commissioner of patents and trademarks

Washington, D.C. 20231

Or fax to:

(703)872-9314 (for Technology Center 2600 only)

Shaheda Abdin

06/17/2007

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SUPERVISORY PATENT EXAMINER